Translation

The following guidelines describe safety measures for the operation of autonomous vehicles on China's roads. Notably, the guidelines require trained safety personnel to ride in autonomous or mostly autonomous passenger or freight vehicles, with the exception of driverless taxis, which can be monitored remotely. This is a trial version of the guidelines; CSET has not observed a finalized version of the guidelines online as of the publication date of this translation.

Title
(Trial) Guidelines on Transportation Safety Services for Autonomous Vehicles
自动驾驶汽车运输安全服务指南（试行）

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Source
Ministry of Transport website. The *(Trial) Guidelines* are dated November 21, 2023 and were announced and uploaded to the website on December 5, 2023.

The Chinese source text is available online at:
https://xxgk.mot.gov.cn/2020/jigou/ysfws/202312/t20231205_3962490.html
An archived version of the Chinese source text is available online at: https://perma.cc/BNB9-HC4N

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(Trial) Guidelines on Transportation Safety Services for Autonomous Vehicles

In order to guide the development of autonomous driving technology and standardize the application of autonomous vehicles (自动驾驶汽车) in the transportation services sector, these guidelines have been formulated in accordance with the *Production Safety Law of the People's Republic of China*, the *Road Traffic Safety Law of the People's Republic of China*, the *Regulation of the People's Republic of China on Road Transport*, and other relevant laws and regulations, as well as relevant provisions on road transport and urban passenger transport management.

I. Scope of Application

These Guidelines apply to the use of autonomous vehicles on urban roads, highways, and other roads open to public motor vehicle traffic to engage in urban public bus and streetcar passenger transport, taxi passenger transport, road passenger transport operations, and road freight transport operations.

As used in these Guidelines, the term "autonomous vehicles" refers to vehicles that meet relevant national standards, are able to perform all dynamic driving tasks under their designed operating conditions, and have been included within the scope of product access by industry and information technology departments. It includes vehicles classified as conditionally autonomous vehicles, highly autonomous vehicles, and fully autonomous vehicles as defined in the national standard *Taxonomy of Driving Automation for Vehicles* (GB/T 40429-2021).

II. Basic Principles

The use of autonomous vehicles to engage in urban public bus and streetcar passenger transport, taxi passenger transport, road passenger transport operations, and road freight transport operations (hereinafter collectively referred to as "autonomous vehicle transport operations") shall adhere to the principles of compliance with laws and regulations, integrity and trustworthiness, putting safety first, and being innovation-driven. The management of autonomous vehicle transportation shall adhere to the principles of safety first, upholding fundamentals while innovating, inclusiveness and openness, and orderly advancement.

III. Application Scenarios

To ensure transportation safety, autonomous vehicles carrying out road transportation services shall operate within designated areas, and shall have passed road traffic safety assessments in accordance with law. Where autonomous vehicles are used to engage in urban public bus and streetcar passenger transport operations, they may operate on fixed routes with physically enclosed, relatively enclosed, or simple road conditions, and in traffic safety-controlled scenarios; where autonomous vehicles are used for taxi passenger transport operations, they may operate in scenarios with good traffic conditions and controllable traffic safety. The use of autonomous vehicles for road passenger transport operations shall be conducted with caution. Autonomous vehicles may be used for road freight transport operations in scenarios such as point-to-point arterial highway (干线公路) transport or urban roads with controllable traffic safety. The use of autonomous vehicles to engage in the transport of dangerous freight on roads is prohibited.

IV. Autonomous Vehicle Transportation Operators

Operators that use autonomous vehicles to engage in urban public bus and streetcar passenger transport, taxi passenger transport, road passenger transport, or road freight transport (hereinafter collectively referred to as "autonomous vehicle transportation operators") shall complete market entity (市场主体) registration in accordance with law, with the corresponding business categories registered in their scope of business. Taxi passenger transport (including ridesharing) and road passenger transportation operators shall take out passenger carrier liability insurance in accordance with law. Those engaged in urban public bus and streetcar transport operations shall comply with the relevant operational requirements of the State and of the people's government of the city in which they operate. Those engaged in taxi passenger transport, road passenger transport operations, or road freight transport operations shall possess operating licenses for the corresponding business categories. Urban passenger transport enterprises and road transport enterprises may form joint ventures with automobile manufacturers to engage in autonomous vehicle transport operations. Autonomous vehicle transportation operators shall complete the necessary procedures in accordance with law, and local main oversight departments (主管部门) for transportation shall provide channels for autonomous driving transport operators to complete procedures for engaging in autonomous driving vehicle transportation services.

V. Transportation Vehicles

Autonomous vehicles engaging in road transport operations shall comply with national standards, technical specifications, and other requirements, motor vehicle registration shall be completed in accordance with law, and motor vehicle license plates and motor vehicle registration certificates shall be obtained. Autonomous vehicles engaging in urban public bus and streetcar passenger transport shall comply with the relevant operational requirements of the State and of the people's government of the city in which they operate. Autonomous vehicles engaging in taxi passenger transport, road passenger transport operations, or road freight transport operations shall also comply with the relevant technical standards of the transportation industry for the operational safety of motor vehicles used for business, and legally obtain a Ridesharing Transportation Certificate or Road Transport Certificate issued by the main oversight department for transportation in the locality in which they operate. Autonomous vehicles that need to change their autonomous driving functions or upgrade their vehicle software systems shall comply with the provisions of departments of industry and information technology, to ensure the safe operation of the vehicle.

Autonomous vehicles engaging in road transport operations shall comply with the

Road Traffic Safety Law of the People's Republic of China, the *Regulation of the People's Republic of China on Road Transport*, the *Regulation on Compulsory Traffic Accident Liability Insurance for Motor Vehicles,* and the *Notice of the Ministry of Industry and Information Technology and the Ministry of Transport on the Issuance of (Trial) Management Rules for Road Testing and Demonstration Application of Intelligent Connected Vehicles* (Ministry of Industry and Information Technology [2021] No. 97), and provide a certificate of compulsory traffic accident liability insurance, as well as a certificate of traffic accident liability insurance or an accident compensation promissory note.

VI. Staffing

Autonomous vehicles engaging in urban public bus and streetcar passenger transport or road passenger transport operations shall have 1 driver or operational safety assurance officer (hereinafter referred to as “safety officer”) on board. Autonomous vehicles engaging in road freight transport operations shall, in principle, have a safety officer on board. Conditionally autonomous vehicles and highly automated vehicles engaging in taxi passenger transport shall have 1 safety officer on board. Fully autonomous vehicles engaging in taxi passenger transport may, on the precondition that safety is assured and with the approval of the people's governments of cities divided into districts, use remote safety officers in designated areas, with a ratio of remote safety officers (远程安全人员) to vehicles of no less than 1:3. Safety officers shall: Undergo training in autonomous vehicle technology and the relevant transportation services they provide; be proficient in the provisions of road traffic safety laws and regulations, and the skills for operating autonomous driving systems of different levels; be familiar with the operational routes of autonomous vehicles; and possess the ability to take control of the vehicle and handle emergencies in critical situations. Following any changes or updates of the autonomous driving functions of autonomous vehicles, autonomous vehicle transportation operators shall promptly strengthen on-the-job training for safety officers, so as to ensure that they master new functions, technologies, and requirements in a timely fashion. Safety officers shall comply with relevant regulations and requirements on the management of employees in the transportation sector, and obtain the professional qualifications to practice in the corresponding business categories.

VII. Safety Assurance

(1) Safe production system.

Autonomous vehicle transportation operators shall fulfill the main responsibility for safe production, and establish and implement operational safety management

systems, including but not limited to: a comprehensive safe production responsibility system for all employees, a vehicle technology management system, a safety assessment system, a safety hazard identification and rectification system, a dynamic monitoring management system, a cybersecurity management system, a safety management system for employees, safe production operating procedures for critical positions, and education and training plans for safe production and emergency response.

(2) Transportation safety assurance.

Autonomous vehicle transportation operators shall establish and improve a transportation safety assurance system. Prior to formal operation, they shall formulate an autonomous vehicle transportation safety assurance plan specifying the designed operational conditions of the autonomous vehicles, staffing of personnel, operational safety risk lists, graded management and control measures (分级管控措施), and emergency response measures. Autonomous vehicle transportation operators shall enter into agreements with vehicle manufacturers, safety officers, and other relevant parties to clarify the rights, responsibilities, and obligations of all parties, and shall organize professional reviews and safety risk assessments of the transportation safety assurance plan. The transportation safety assurance plan and safety risk assessment report shall be submitted to the main oversight departments for transportation, public security traffic police departments, and emergency management departments of the localities where operations are taking place. Autonomous vehicle transportation operators shall ensure transportation safety. If significant hazards arise and transportation safety cannot be guaranteed, autonomous vehicle transport operations shall be promptly suspended in accordance with the law.

(3) Management of operational status information.

Autonomous vehicle operators shall ensure that vehicles are in good technical condition and are used and operated in accordance with the vehicle manual. Autonomous vehicles engaging in road transport operations shall be equipped with functions to record, store, and transmit vehicle operational status information, and shall transmit key operational status information in real time to the autonomous vehicle operator and the relevant main oversight departments of the localities in which they are operated. In the event of an accident or failure of the autonomous driving function, the system shall automatically have recorded and stored operational status information for at least 90 seconds prior to the incident. Operational status information includes, but is not limited to, the following 10 items: vehicle identification (vehicle identification number or license plate information, etc.); vehicle control mode; vehicle location; vehicle speed, acceleration, direction of travel, and other motion states; environmental

perception and response status; real-time status of vehicle lights and signals; 360-degree video monitoring of the vehicle's exterior; in-vehicle video and audio monitoring reflecting the driver's status and human-computer interaction; remote control commands received by the vehicle (if any); and vehicle malfunction status (if applicable).

(4) Dynamic vehicle monitoring.

If vehicles comply with the *Measures for the Dynamic Supervision and Administration of Road Transport Vehicles* and relevant national regulations, it is necessary to strengthen the dynamic monitoring of autonomous vehicles, monitor and manage the operating area, operating route, and operating status of the vehicles, and call attention to, correct, and handle illegal and irregular behavior in a timely fashion. Main oversight departments for transportation in the localities of operation shall urge autonomous vehicle operators to strengthen the dynamic management of transportation vehicles and safety officers.

(5) Safety notification.

Autonomous vehicles shall display their autonomous driving status to other road users, using prominent patterns, text, or colors on the vehicle body to indicate such status. Operators using autonomous vehicles for urban public bus and streetcar passenger transport, taxi passenger transport, or road passenger transport shall inform passengers of the vehicle's autonomous driving functions, safe riding information, safety facility usage methods, and emergency escape procedures through video playback or posted signs.

(6) Emergency procedures.

Autonomous vehicle transportation operators shall formulate emergency response plans for emergencies during autonomous vehicle operation, specifying the types and levels of emergencies, response methods, emergency response procedures, division of duties, and assurance measures, and regularly organize emergency drills. When vehicle malfunctions or safety incidents occur during autonomous vehicle operation, autonomous vehicle transportation operators shall activate emergency responses in accordance with the emergency response plan and implement emergency measures; in the event of a work-related accident resulting in injury or death, they shall report the incident in accordance with national regulations and in a timely fashion to the main oversight department for transportation in the locality in which the incident occurred.

VIII. Supervision and Administration

(1) Routine supervision.

Main oversight departments for transportation shall, in conjunction with the relevant departments, strengthen supervision and administration of autonomous vehicle transport operations, conduct supervision and inspection in accordance with “double random, one open”[1] requirements and urge autonomous vehicle manufacturers and autonomous vehicle transportation operators to strictly comply with national laws and regulations in conducting road transport operations, so as to assure transportation safety. Local main oversight departments for transportation may, based on local conditions, formulate safety requirements and measures that exceed the standards of these Guidelines.

(2) Rectification of hazards.

If there are major safety hazards in the use of autonomous vehicles for road transport operations, the main oversight departments for transportation in the localities of operation shall, in conjunction with the relevant departments, order the autonomous vehicle manufacturer and autonomous vehicle transportation operator to rectify the problems in a timely fashion in accordance with their legal responsibilities. If transportation safety cannot be guaranteed, measures shall be taken in accordance with relevant laws and regulations, including the *Production Safety Law of the People's Republic of China*, the *Road Traffic Safety Law of the People's Republic of China*, and the *Regulation of the People's Republic of China on Road Transport.*

(3) Information feedback.

If technical defects, hazards, or problems are discovered in autonomous vehicles during operation, autonomous vehicle transportation operators shall report them to the relevant main oversight department in accordance with law. The relevant main oversight department shall urge the vehicle manufacturers to promptly investigate and rectify the issues, eliminate safety hazards, and ensure production safety. The main oversight departments for transportation in the localities of operation shall regularly monitor and summarize the local autonomous vehicle operation service situation, and keep track of industry safety and operational service conditions. Provincial-level main oversight departments for transportation shall report the operational situation of autonomous vehicle transportation services within their jurisdictions to the Ministry of Transport by the end of each year.

[1] Translator's note: "Double random, one open" (“双随机、一公开”) applies to various oversight processes. It stands for: "Choose targets for extraction and inspection at random, assign law enforcement and inspection personnel to cases at random, and make the spot check process and the results of investigations open to the public in a timely fashion."

Cc: The China Academy of Transportation Sciences and the Research Institute of Highways under the Ministry of Transport, and the Discipline Inspection Group of the Central Commission for Discipline Inspection and the National Supervisory Commission forward-deployed to the Ministry of Transport.